

ABSTRACT OF THE DISCLOSURE

A receiver optical amplifier assembly (ROSA) is disclosed that provides for greater tolerances in alignment. The ROSA includes a multimode fiber stub to receive a light beam from a single mode optical fiber. The light beam from the multimode fiber stub is focused by a lens system onto the active area of an optical detector chip. The multimode fiber stub acts as a GRIN lens and allows for optimization of the spot size on the active area. Additionally, in some embodiments the return loss characteristics of the ROSA can be greatly improved by including an angled surface on the multimode fiber stub and moving the active area of the optical detector chip off-axis to compensate.